SEQUENCE LISTING

<110>   Skånemejerier AB

<120>   NEW ENZYME AND ITS USE

<130>   75086

<150>   US 60/320,139
<151>   2003-04-24

<150>   US 60/481,598
<151>   2003-11-05

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<170>   PatentIn version 3.2

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Met Arg Gly Pro Ala Val Leu Leu Thr Val Ala Leu Ala Thr Leu Leu
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Ala Pro Gly Ala Gly Ala Pro Val Gln Ser Gln Gly Ser Gln Asn Lys
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Leu Leu Leu Val Ser Phe Asp Gly Phe Arg Trp Asn Tyr Asp Gln Asp
        35   40   45

Val Asp Thr Pro Asn Leu Asp Ala Met Ala Arg Asp Gly Val Lys Ala
    50   55   60

Arg Tyr Met Thr Pro Ala Phe Val Thr Met Thr Ser Pro Cys His Phe
65   70   75   80

Thr Leu Val Thr Gly Lys Tyr Ile Glu Asn His Gly Val Val His Asn
                85   90   95

Met Tyr Tyr Asn Thr Thr Ser Lys Val Lys Leu Pro Tyr His Ala Thr
                100   105   110

Leu Gly Ile Gln Arg Trp Trp Asp Asn Gly Ser Val Pro Ile Trp Ile
            115   120   125

Thr Ala Gln Arg Gln Gly Leu Arg Ala Gly Ser Phe Phe Tyr Pro Gly

1

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```
Gly Asn Val Thr Tyr Gln Gly Val Ala Val Thr Arg Ser Arg Lys Glu
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```

```
Gly Ile Ala His Asn Tyr Lys Asn Glu Thr Glu Trp Arg Ala Asn Ile
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```

```
Asp Thr Val Met Ala Trp Phe Thr Glu Glu Asp Leu Asp Leu Val Thr
                180             185             190
```

```
Leu Tyr Phe Gly Glu Pro Asp Ser Thr Gly His Arg Tyr Gly Pro Glu
        195             200             205
```

```
Ser Pro Glu Arg Arg Glu Met Val Arg Gln Val Asp Arg Thr Val Gly
    210             215             220
```

```
Tyr Leu Arg Glu Ser Ile Ala Arg Asn His Leu Thr Asp Arg Leu Asn
225             230             235             240
```

```
Leu Ile Ile Thr Ser Asp His Gly Met Thr Thr Val Asp Lys Arg Ala
                245             250             255
```

```
Gly Asp Leu Val Glu Phe His Lys Phe Pro Asn Phe Thr Phe Arg Asp
                260             265             270
```

```
Ile Glu Phe Glu Leu Leu Asp Tyr Gly Pro Asn Gly Met Leu Leu Pro
        275             280             285
```

```
Lys Glu Gly Arg Leu Glu Lys Val Tyr Asp Ala Leu Lys Asp Ala His
    290             295             300
```

```
Pro Lys Leu His Val Tyr Lys Lys Glu Ala Phe Pro Glu Ala Phe His
305             310             315             320
```

```
Tyr Ala Asn Asn Pro Arg Val Thr Pro Leu Leu Met Tyr Ser Asp Leu
                325             330             335
```

```
Gly Tyr Val Ile His Gly Arg Ile Asn Val Gln Phe Asn Asn Gly Glu
        340             345             350
```

```
His Gly Phe Asp Asn Lys Asp Met Asp Met Lys Thr Ile Phe Arg Ala
        355             360             365
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```
Val Gly Pro Ser Phe Arg Ala Gly Leu Glu Val Glu Pro Phe Glu Ser
370             375             380
```

```
Val His Val Tyr Glu Leu Met Cys Arg Leu Leu Gly Ile Val Pro Glu
385                 390             395                 400

Ala Asn Asp Gly His Leu Ala Thr Leu Leu Pro Met Leu His Thr Glu
            405             410                 415

Ser Ala Leu Pro Pro Asp Ala Leu Leu Val Ala Asp Gly Pro Cys Leu
            420             425                 430

Pro Ser Leu Ser Gln Ala Lys Gly Cys Met Pro Leu Ser Pro Ala Ala
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Pro Thr Pro Ala Trp Leu Leu Trp Cys Trp  .
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Lys Tyr



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Met Arg Gly Pro Ala Val Leu Leu Thr Val Ala Leu Ala Thr Leu Leu
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Ala Pro Gly Ala Gly Ala Pro Val Gln Ser Gln Gly Ser Gln Asn Lys
            20                  25                  30


Leu Leu Leu Val Ser Phe Asp Gly Phe Arg Trp Asn Tyr Asp Gln Asp
        35                  40                  45


Val Asp Thr Pro Asn Leu Asp Ala Met Ala Arg Asp Gly Val Lys Ala
    50                  55                  60


Arg Tyr Met Thr Pro Ala Phe Val Thr Met Thr Ser Pro Cys His Phe
65                  70                  75                  80


Thr Leu Val Thr Gly Lys Tyr Ile Glu Asn His Gly Val Val His Asn
                85                  90                  95


Met Tyr Tyr Asn Thr Thr Ser Lys Val Lys Leu Pro Tyr His Ala Thr
            100                 105                 110


Leu Gly Ile Gln Arg Trp Trp Asp Asn Gly Ser Val Pro Ile Trp Ile
        115                 120                 125


Thr Ala Gln Arg Gln Gly Leu Arg Ala Gly Ser Phe Phe Tyr Pro Gly
    130                 135                 140
```

```
Gly Asn Val Thr Tyr Gln Gly Val Ala Val Thr Arg Ser Arg Lys Glu
145                 150             155                 160


Gly Ile Ala His Asn Tyr Lys Asn Glu Thr Glu Trp Arg Ala Asn Ile
                165             170                 175


Asp Thr Val Met Ala Trp Phe Thr Glu Glu Asp Leu Asp Leu Val Thr
            180             185                 190


Leu Tyr Phe Gly Glu Pro Asp Ser Thr Gly His Arg Tyr Gly Pro Glu
        195             200                 205


Ser Pro Glu Arg Arg Glu Met Val Arg Gln Val Asp Arg Thr Val Gly
    210             215                 220


Tyr Leu Arg Glu Ser Ile Ala Arg Asn His Leu Thr Asp Arg Leu Asn
225             230             235                 240


Leu Ile Ile Thr Ser Asp His Gly Met Thr Thr Val Asp Lys Arg Ala
            245             250                 255


Gly Asp Leu Val Glu Phe His Lys Phe Pro Asn Phe Thr Phe Arg Asp
            260             265                 270


Ile Glu Phe Glu Leu Leu Asp Tyr Gly Pro Asn Gly Met Leu Leu Pro
        275             280                 285


Lys Glu Gly Arg Leu Glu Lys Val Tyr Asp Ala Leu Lys Asp Ala His
    290             295                 300


Pro Lys Leu His Val Tyr Lys Lys Glu Ala Phe Pro Glu Ala Phe His
305             310                 315                 320


Tyr Ala Asn Asn Pro Arg Val Thr Pro Leu Leu Met Tyr Ser Asp Leu
            325             330                 335


Gly Tyr Val Ile His Gly Arg Ile Asn Val Gln Phe Asn Asn Gly Glu
        340             345                 350


His Gly Phe Asp Asn Lys Asp Met Asp Met Lys Thr Ile Phe Arg Ala
        355             360                 365


Val Gly Pro Ser Phe Arg Ala Gly Leu Glu Val Glu Pro Phe Glu Ser
    370             375                 380


Val His Val Tyr Glu Leu Met Cys Arg Leu Leu Gly Ile Val Pro Glu
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```
     385                     390                     395                     400
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```
Ala Asn Asp Gly His Leu Ala Thr Leu Leu Pro Met Leu His Thr Glu
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```

```
Ser Ala Leu Pro Pro Asp Gly Arg Pro Thr Leu Leu Pro Lys Gly Arg
            420                     425                     430
```

```
Ser Ala Leu Pro Pro Ser Ser Arg Pro Leu Leu Val Met Gly Leu Leu
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Gly Thr Val Ile Leu Leu Ser Glu Val Ala
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Met Arg Gly Pro Ala Val Leu Leu Thr Val Ala Leu Ala Thr Leu Leu
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Ala Pro Gly Ala Gly Ala Pro Val Gln Ser Gln Gly Ser Gln Asn Lys
            20   25   30

Leu Leu Leu Val Ser Phe Asp Gly Phe Arg Trp Asn Tyr Asp Gln Asp
        35   40   45

Val Asp Thr Pro Asn Leu Asp Ala Met Ala Arg Asp Gly Val Lys Ala
    50   55   60

Arg Tyr Met Thr Pro Ala Phe Val Thr Met Thr Ser Pro Cys His Phe
65   70   75   80

Thr Leu Val Thr Gly Lys Tyr Ile Glu Asn His Gly Val Val His Asn
                85   90   95

Met Tyr Tyr Asn Thr Thr Ser Lys Val Lys Leu Pro Tyr His Ala Thr
            100   105   110

Leu Gly Ile Gln Arg Trp Trp Asp Asn Gly Ser Val Pro Ile Trp Ile
        115   120   125

Thr Ala Gln Arg Gln Gly Leu Arg Ala Gly Ser Phe Phe Tyr Pro Gly
    130   135   140

Gly Asn Val Thr Tyr Gln Gly Val Ala Val Thr Arg Ser Arg Lys Glu
145   150   155   160

Gly Ile Ala His Asn Tyr Lys Asn Glu Thr Glu Trp Arg Ala Asn Ile

9

                          165   170   175

Asp Thr Val Met Ala Trp Phe Thr Glu Glu Asp Leu Asp Leu Val Thr
            180   185   190

Leu Tyr Phe Gly Glu Pro Asp Ser Thr Gly His Arg Tyr Gly Pro Glu
            195   200   205

Ser Pro Glu Arg Arg Glu Met Val Arg Gln Val Asp Arg Thr Val Gly
    210   215   220

Tyr Leu Arg Glu Ser Ile Ala Arg Asn His Leu Thr Asp Arg Leu Asn
225   230   235   240

Leu Ile Ile Thr Ser Asp His Gly Met Thr Thr Val Asp Lys Arg Ala
                245   250   255

Gly Asp Leu Val Glu Phe His Lys Phe Pro Asn Phe Thr Phe Arg Asp
            260   265   270

Ile Glu Phe Glu Leu Leu Asp Tyr Gly Pro Asn Gly Met Leu Leu Pro
            275   280   285

Lys Glu Gly Arg Leu Glu Lys Val Tyr Asp Ala Leu Lys Asp Ala His
    290   295   300

Pro Lys Leu His Val Tyr Lys Lys Glu Ala Phe Pro Glu Ala Phe His
305   310   315   320

Tyr Ala Asn Asn Pro Arg Val Thr Pro Leu Leu Met Tyr Ser Asp Leu
                325   330   335

Gly Tyr Val Ile His Gly Arg Ile Asn Val Gln Phe Asn Asn Gly Glu
            340   345   350

His Gly Phe Asp Asn Lys Asp Met Asp Met Lys Thr Ile Phe Arg Ala
            355   360   365

Val Gly Pro Ser Phe Arg Ala Gly Leu Glu Val Glu Pro Phe Glu Ser
    370   375   380

Val His Val Tyr Glu Leu Met Cys Arg Leu Leu Gly Ile Val Pro Glu
385   390   395   400

Ala Asn Asp Gly His Leu Ala Thr Leu Leu Pro Met Leu His Thr
                405   410   415

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<210>    9
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Pro Thr Lys Thr Phe Pro Asn
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